

General

Title

Potentially harmful drug-disease interactions in the elderly: percentage of Medicare patients 65 years of age and older who have evidence of an underlying disease, condition or health concern and who were dispensed an ambulatory prescription for a potentially harmful medication, concurrent with or after the diagnosis.

Source(s)

National Committee for Quality Assurance (NCQA). HEDIS 2015 technical specifications for ACO measurement. Washington (DC): National Committee for Quality Assurance (NCQA); 2014. various p.

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of Medicare patients 65 years of age and older who have evidence of an underlying disease, condition or health concern and who were dispensed an ambulatory prescription for a potentially harmful medication, concurrent with or after the diagnosis.

Report each of the three rates separately and as a total rate.

A history of falls and a prescription for anticonvulsants, nonbenzodiazepine hypnotics, selective serotonin re-uptake inhibitors (SSRIs), antiemetics, antipsychotics, benzodiazepines or tricyclic antidepressants

Dementia and a prescription for antiemetics, antipsychotics, benzodiazepines, tricyclic antidepressants, H2 receptor antagonists, nonbenzodiazepine hypnotics or anticholinergic agents

Chronic kidney disease and prescription for cyclo-oxygenase (Cox)-2 selective nonsteroidal anti-inflammatory drugs (NSAIDs) or nonasprin NSAIDs

Total rate (the sum of the three numerators divided by the sum of the three denominators)

This measure summary represents the total rate.

Note: Patients with more than one disease or condition may appear in the measure multiple times (i.e., in each indicator for which they qualify).

Rationale

Pharmacotherapy is an essential component of medical treatment for older patients, but medications are also responsible for many adverse events in this group. Almost 90 percent of people 65 and older take at least one medication, significantly more than any other age group (Agency for Healthcare Research and Quality [AHRQ], 1996). Patient safety is highly important to member health, especially patients who are at increased risk of adverse drug events due to coexisting conditions and polypharmacy. Adverse drug events have been linked to preventable problems in elderly patients, such as depression, constipation, falls, immobility, confusion and hip fractures. Thirty percent of elderly-patient hospital admissions may be linked to drug-related problems or toxic effects (Hanlon et al., 1997).

Drug-disease interactions identified for reporting in this measure are based on the literature and on the key clinical expert consensus process by Beers that identified potentially inappropriate medication use in older adults with specific diagnoses or conditions. The National Committee for Quality Assurance's (NCQA's) medication management expert panel provided advice on the conditions and drugs to be included in this measure, based on the updated Beers list and a Canadian panel and significance of harm and impact on the older adult population (Fick et al., 2003).

Evidence for Rationale

Agency for Healthcare Research and Quality. Health care use in America-1996 Medical Expenditure Panel Survey Highlights. Rockville (MD): Agency for Healthcare Research and Quality; 1996.

Fick DM, Cooper JW, Wade WE, Waller JL, Maclean JR, Beers MH. Updating the Beers criteria for potentially inappropriate medication use in older adults: results of a US consensus panel of experts. Arch Intern Med. 2003 Dec 8-22;163(22):2716-24. [PubMed](#)

Hanlon JT, Schmader KE, Koronkowski MJ, Weinberger M, Landsman PB, Samsa GP, Lewis IK. Adverse drug events in high risk older outpatients. J Am Geriatr Soc. 1997 Aug;45(8):945-8. [PubMed](#)

National Committee for Quality Assurance (NCQA). HEDIS 2015: Healthcare Effectiveness Data and Information Set. Vol. 1, narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2014. various p.

Primary Health Components

Medication safety; falls; hip fracture; dementia; chronic kidney disease; anticonvulsants; nonbenzodiazepine hypnotics; selective serotonin re-uptake inhibitors (SSRIs); antiemetics; antipsychotics; benzodiazepines; tricyclic antidepressants; H2 receptor antagonists; nonbenzodiazepine hypnotics; anticholinergic agents; cyclo-oxygenase (Cox)-2 selective nonsteroidal anti-inflammatory drugs (NSAIDs); nonasprin NSAIDs; elderly

Denominator Description

- *Rate 1: Drug-disease interactions—history of falls and anticonvulsants, nonbenzodiazepine hypnotics, selective serotonin re-uptake inhibitors (SSRIs), antiemetics, antipsychotics,*

benzodiazepines or tricyclic antidepressants: Patients age 67 years and older as of December 31 of the measurement year who had an accidental fall or hip fracture on or between January 1 of the year prior to the measurement year and December 1 of the measurement year

- *Rate 2: Drug-disease interactions—dementia and antiemetics, antipsychotics, benzodiazepines, tricyclic antidepressants, H2 receptor antagonists, nonbenzodiazepine hypnotics or anticholinergic agents*: Patients age 67 years and older as of December 31 of the measurement year with a diagnosis of dementia or a dispensed dementia medication on or between January 1 of the year prior to the measurement year and December 1 of the measurement year
- *Rate 3: Drug-disease interactions—cyclo-oxygenase (Cox)-2 selective nonsteroidal anti-inflammatory drugs (NSAIDs) or nonaspirin NSAIDs*: Patients age 67 years and older as of December 31 of the measurement year with chronic kidney disease as identified by a diagnosis of end-stage renal disease (ESRD), stage 4 chronic kidney disease or kidney transplant on or between January 1 of the year prior to the measurement year and December 1 of the measurement year

See the related "Denominator Inclusions/Exclusions" field.

Numerator Description

- *Rate 1: Drug-disease interactions—history of falls and anticonvulsants, nonbenzodiazepine hypnotics, selective serotonin re-uptake inhibitors (SSRIs), antiemetics, antipsychotics, benzodiazepines or tricyclic antidepressants*: Dispensed an ambulatory prescription for an anticonvulsant, nonbenzodiazepine hypnotic, selective serotonin re-uptake inhibitor (SSRI) or antiemetic, antipsychotic, benzodiazepine or tricyclic antidepressant on or between the Index Episode Start Date (IESD) and December 31 of the measurement year
- *Rate 2: Drug-disease interactions—dementia and antiemetics, antipsychotics, benzodiazepines, tricyclic antidepressants, H2 receptor antagonists, nonbenzodiazepine hypnotics or anticholinergic agents*: Dispensed an ambulatory prescription for an antiemetic, antipsychotic, benzodiazepine or tricyclic antidepressant or H2 receptor antagonist, nonbenzodiazepine hypnotic or anticholinergic agent on or between the IESD and December 31 of the measurement year
- *Rate 3: Drug-disease interactions—cyclo-oxygenase (Cox)-2 selective nonsteroidal anti-inflammatory drugs (NSAIDs) or nonaspirin NSAIDs*: Evidence of an NSAID or Cox-2 selective NSAID on or between the IESD and December 31 of the measurement year

See the related "Numerator Inclusions/Exclusions" field.

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

Unspecified

Extent of Measure Testing

All HEDIS measures undergo systematic assessment of face validity with review by measurement advisory

panels, expert panels, a formal public comment process and approval by the National Committee for Quality Assurance's (NCQA's) Committee on Performance Measurement and Board of Directors. Once NCQA establishes national benchmarks for accountable care organization (ACO) performance, all measures will undergo formal reliability testing of the performance measure score using beta-binomial statistical analysis. Where applicable, measures also are assessed for construct validity using the Pearson correlation test.

Evidence for Extent of Measure Testing

Rehm B. (Assistant Vice President, Performance Measurement, National Committee for Quality Assurance, Washington, DC). Personal communication. 2015 Apr 8. 1 p.

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Accountable Care Organizations

Ambulatory/Office-based Care

Emergency Department

Hospital Inpatient

Hospital Outpatient

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Multisite Health Care or Public Health Organizations

Statement of Acceptable Minimum Sample Size

Specified

Target Population Age

Age greater than or equal to 65 years

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Health and Well-being of Communities

Making Care Safer

Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Staying Healthy

IOM Domain

Effectiveness

Safety

Data Collection for the Measure

Case Finding Period

January 1 of the year prior to the measurement year to December 1 of the measurement year

Denominator Sampling Frame

Patients associated with provider

Denominator (Index) Event or Characteristic

Clinical Condition

Encounter

Institutionalization

Patient/Individual (Consumer) Characteristic

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions

Rate 1: Drug-disease interactions—history of falls and anticonvulsants, nonbenzodiazepine hypnotics, selective serotonin re-uptake inhibitors (SSRIs), antiemetics, antipsychotics, benzodiazepines or tricyclic antidepressants: Patients age 67 years and older as of December 31 of the measurement year who had an accidental fall or hip fracture. Patients with either of the following on or between January 1 of the year prior to the measurement year and December 1 of the measurement year meet criteria:

An accidental fall (Falls Value Set)

An outpatient visit (Outpatient Value Set), an observation visit (Observation Value Set), an emergency department (ED) visit (ED Value Set), a nonacute inpatient encounter (Nonacute Inpatient Value Set) or an acute inpatient encounter (Acute Inpatient Value Set) with a hip fracture (Hip Fractures Value Set)

Rate 2: Drug-disease interactions—dementia and antiemetics, antipsychotics, benzodiazepines, tricyclic antidepressants, H2 receptor antagonists, nonbenzodiazepine hypnotics or anticholinergic agents: Patients age 67 years and older as of December 31 of the measurement year who had a diagnosis of dementia (Dementia Value Set) or a dispensed dementia medication on or between January 1 of the year prior to the measurement year and December 1 of the measurement year. Refer to Table ADDE-F in the original measure documentation for a list of medications for dementia.

Rate 3: Drug-disease interactions—cyclo-oxygenase (Cox)-2 selective nonsteroidal anti-inflammatory drugs (NSAIDs) or nonasprin NSAIDs: Patients age 67 years and older as of December 31 of the measurement year with chronic kidney disease as identified by a diagnosis of end-stage renal disease (ESRD) (ESRD Value Set), stage 4 chronic kidney disease (CKD) (CKD Stage 4 Value Set) or kidney transplant (Kidney Transplant Value Set) on or between January 1 of the year prior to the measurement year and December 1 of the measurement year

Note: *Rate 1:* Hip fractures are used as a proxy for identifying accidental falls.

Exclusions

Rate 1: Exclude patients with a diagnosis of psychosis (Psychosis Value Set), schizophrenia (Schizophrenia Value Set), bipolar disorder (Bipolar Disorder Value Set) or seizure disorder (Seizure Disorders Value Set) on or between January 1 of the year prior to the measurement year and December 1 of the measurement year.

Value Set Information

Measure specifications reference value sets that must be used for HEDIS reporting. A value set is the complete set of codes used to identify the service(s) or condition(s) included in the measure. Refer to the [NCQA Web site](#) to purchase *HEDIS 2015 Technical Specifications for ACO Measurement*, which includes the Value Set Directory.

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions

Rate 1: Drug-disease interactions—history of falls and anticonvulsants, nonbenzodiazepine hypnotics, selective serotonin re-uptake inhibitors (SSRIs), antiemetics, antipsychotics, benzodiazepines or tricyclic antidepressants: Dispensed an ambulatory prescription for an anticonvulsant, nonbenzodiazepine hypnotic, SSRI or antiemetic, antipsychotic, benzodiazepine or tricyclic antidepressant on or between the Index Episode Start Date (IESD) and December 31 of the measurement year. Refer to Tables ADDE-C and ADDE-D in the original measure documentation for lists of potentially harmful drugs.

Rate 2: Drug-disease interactions—dementia and antiemetics, antipsychotics, benzodiazepines, tricyclic antidepressants, H2 receptor antagonists, nonbenzodiazepine hypnotics or anticholinergic agents: Dispensed an ambulatory prescription for an antiemetic, antipsychotic, benzodiazepine or tricyclic antidepressant or H2 receptor antagonist, nonbenzodiazepine hypnotic or anticholinergic agent on or between the IESD and December 31 of the measurement year. Refer to Table ADDE-D and Table ADDE-G for lists of potentially harmful drugs.

Rate 3: Drug-disease interactions—cyclo-oxygenase (Cox)-2 selective nonsteroidal anti-inflammatory drugs (NSAIDs) or nonasprin NSAIDs: Evidence of an NSAID or Cox-2 selective NSAID on or between the IESD and December 31 of the measurement year. Refer to Table ADDE-I for a list of Cox-2 selective NSAIDs and nonasprin NSAIDs.

Note:

IESD: The earliest diagnosis, procedure or medication treatment between January 1 of the year prior to the measurement year and December 1 of the measurement year.

For an outpatient visit, the IESD is the date of service.

For an inpatient stay, the IESD is the discharge date.

For dispensed medications, the IESD is the dispense date.

For prescribed medications, the IESD is the date the prescription was ordered/written.

Total rate (the sum of the three numerators divided by the sum of the three denominators)

Exclusions

Unspecified

Value Set Information

Measure specifications reference value sets that must be used for HEDIS reporting. A value set is the complete set of codes used to identify the service(s) or condition(s) included in the measure. Refer to the [NCQA Web site](#) to purchase *HEDIS 2015 Technical Specifications for ACO Measurement*, which includes the Value Set Directory.

Numerator Search Strategy

Fixed time period or point in time

Data Source

Administrative clinical data

Electronic health/medical record

Paper medical record

Pharmacy data

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

Unspecified

Computation of the Measure

Measure Specifies Disaggregation

Measure is disaggregated into categories based on different definitions of the denominator and/or numerator

Basis for Disaggregation

This measure is disaggregated based on different definitions of the denominator and numerator. Report each of the three rates separately and as a combined rate.

Denominators:

Rate 1: Drug-disease interactions—history of falls and anticonvulsants, nonbenzodiazepine hypnotics, selective serotonin re-uptake inhibitors (SSRIs), antiemetics, antipsychotics, benzodiazepines or tricyclic antidepressants: Patients age 67 years and older as of December 31 of the measurement year who had an accidental fall or hip fracture on or between January 1 of the year prior to the measurement year and December 1 of the measurement year

Rate 2: Drug-disease interactions—dementia and antiemetics, antipsychotics, benzodiazepines, tricyclic antidepressants, H2 receptor antagonists, nonbenzodiazepine hypnotics or anticholinergic agents: Patients age 67 years and older as of December 31 of the measurement year with a diagnosis of dementia or a dispensed dementia medication on or between January 1 of the year prior to the measurement year and December 1 of the measurement year

Rate 3: Drug-disease interactions—cyclo-oxygenase (Cox)-2 selective nonsteroidal anti-inflammatory drugs (NSAIDs) or nonasprin NSAIDs: Patients age 67 years and older as of December 31 of the measurement year with chronic kidney disease as identified by a diagnosis of end-stage renal disease (ESRD), stage 4 chronic kidney disease or kidney transplant on or between January 1 of the year prior to the measurement year and December 1 of the measurement year

Numerators:

Rate 1: Drug-disease interactions—history of falls and anticonvulsants, nonbenzodiazepine hypnotics, selective serotonin re-uptake inhibitors (SSRIs), antiemetics, antipsychotics, benzodiazepines or tricyclic antidepressants: Dispensed an ambulatory prescription for an anticonvulsant, nonbenzodiazepine hypnotic, selective serotonin re-uptake inhibitor (SSRI) or antiemetic, antipsychotic, benzodiazepine or tricyclic antidepressant on or between the Index Episode Start Date (IESD) and December 31 of the measurement year

Rate 2: Drug-disease interactions—dementia and antiemetics, antipsychotics, benzodiazepines, tricyclic antidepressants, H2 receptor antagonists, nonbenzodiazepine hypnotics or anticholinergic agents: Dispensed an ambulatory prescription for an antiemetic, antipsychotic, benzodiazepine or tricyclic antidepressant or H2 receptor antagonist, nonbenzodiazepine hypnotic or anticholinergic agent on or between the IESD and December 31 of the measurement year

Rate 3: Drug-disease interactions—cyclo-oxygenase (Cox)-2 selective nonsteroidal anti-inflammatory drugs (NSAIDs) or nonasprin NSAIDs: Evidence of an NSAID or Cox-2 selective NSAID on or between

the IESD and December 31 of the measurement year

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a lower score

Allowance for Patient or Population Factors

not defined yet

Description of Allowance for Patient or Population Factors

The Accountable Care Organization (ACO) aggregate population is reported as a whole, with an option to report Medicaid separately for measures for which HEDIS Health Plan Measurement offers Medicaid specifications.

Standard of Comparison

not defined yet

Identifying Information

Original Title

Potentially harmful drug-disease interactions in the elderly (ADDE)

Measure Collection Name

HEDIS 2015: Accountable Care Organization (ACO) Collection

Measure Set Name

Effectiveness of Care

Measure Subset Name

Medication Management

Submitter

National Committee for Quality Assurance - Health Care Accreditation Organization

Developer

National Committee for Quality Assurance - Health Care Accreditation Organization

Funding Source(s)

Unspecified

Composition of the Group that Developed the Measure

National Committee for Quality Assurance's (NCQA's) Measurement Advisory Panels (MAPs) are composed of clinical and research experts with an understanding of quality performance measurement in the particular clinical content areas.

Financial Disclosures/Other Potential Conflicts of Interest

In order to fulfill National Committee for Quality Assurance's (NCQA's) mission and vision of improving health care quality through measurement, transparency and accountability, all participants in NCQA's expert panels are required to disclose potential conflicts of interest prior to their participation. The goal of this Conflict Policy is to ensure that decisions which impact development of NCQA's products and services are made as objectively as possible, without improper bias or influence.

Adaptation

This measure was adapted from the *HEDIS Technical Specifications for Health Plans* ("HEDIS Health Plan Measurement") and *HEDIS Physician Measurement*.

Date of Most Current Version in NQMC

2014 Nov

Measure Maintenance

Annual

Date of Next Anticipated Revision

Unspecified

Measure Status

This is the current release of the measure.

This measure updates a previous version: National Committee for Quality Assurance (NCQA). HEDIS 2013 technical specifications for ACO measurement. Washington (DC): National Committee for Quality Assurance (NCQA); 2012. various p.

The measure developer reaffirmed the currency of this measure in November 2015.

Measure Availability

Source available for purchase from the [National Committee for Quality Measurement \(NCQA\) Web site](#) .

For more information, contact NCQA at 1100 13th Street, NW, Suite 1000, Washington, DC 20005; Phone: 202-955-3500; Fax: 202-955-3599; Web site: www.ncqa.org .

NQMC Status

This NQMC summary was completed by ECRI Institute on June 12, 2013.

This NQMC summary was updated by ECRI Institute on April 21, 2015.

The information was reaffirmed by the measure developer on November 2, 2015.

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Production

Source(s)

National Committee for Quality Assurance (NCQA). HEDIS 2015 technical specifications for ACO measurement. Washington (DC): National Committee for Quality Assurance (NCQA); 2014. various p.

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